

Use of the serologic testing algorithm for recent HIV seroconversion (STARHS) to identify recently acquired HIV infections in men with early syphilis in Los Angeles County.

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BACKGROUND: Syphilis outbreaks among men who have sex with men (MSM) in the United States, many of whom are HIV infected, have prompted increased concern for HIV transmission.

METHODS: To identify whether men are acquiring HIV concomitantly or within the critical period of syphilis infection, banked *Treponema pallidum* particle agglutination-positive serum specimens from men with early syphilis infection were screened for HIV-1 antibody. Samples that were positive for HIV antibody were then tested with a less sensitive (LS) HIV-1 antibody enzyme immunoassay (serologic testing algorithm for recent HIV seroconversion [STARHS]) to identify HIV infections that occurred on average within the previous 6 months.

RESULTS: Of the 212 specimens banked from men with early syphilis, 74 (35%) were HIV-positive. Of these, 15 tested non-reactive by the LS assay. Twelve of these 15 were considered to be recent infections by the LS assay and testing history. Eleven (92%) of the recent infections were among MSM. One man had primary syphilis, 6 (50%) had secondary syphilis, and 5 (42%) had early latent syphilis. Eight men (67%) reported sex with anonymous partners, and 3 (25%) reported consistent condom use. The estimated HIV incidence was 17% per year (95% confidence interval [CI]: 12%-22%) among all men with early syphilis, and it was 26% per year (95% CI: 91%-33%) among MSM.

CONCLUSIONS: Syphilis epidemics in MSM may be contributing to HIV incidence in this population. The STARHS can be applied as a surveillance tool to assess HIV incidence in various at-risk populations, but further studies are necessary for validation.